UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,035	02/27/2002	Robert Kincaid	1001011076-1	6480

7590   06/23/2006

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EXAMINER
SMITH, CAROLYN L

ART UNIT	PAPER NUMBER
1631	

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/087,035	KINCAID, ROBERT
	Examiner	Art Unit	
	Carolyn L. Smith	1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*10 April 2006*</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,22,27,28,31-37 and 41-44* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,22,27,28,31-37 and 41-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission, filed 4/10/06, has been entered.

New claims 42-44 and cancelled claims 12-21, 23-26, 29-30, and 38-40, filed 4/10/06, are acknowledged.

Claims herein under examination are 1-11, 22, 27-28, 31-37, and 41-44.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 (line 3) recites the word "that" which is vague and indefinite. It is unclear what "that" is referring to. It is unclear if the "that" is referring to the visual interface, the visual display, or array layout. The rejection may be overcome by replacing "that" with "wherein the array layout" after the comma, if such an amendment is consistent with applicant's intent.

Clarification of this issue via clearer claim wording is requested. Claims 10-11 are also rejected

due to their dependency from claim 9.

Claim Rejections – 35 USC §102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
patent by another filed in the United States before the invention by the applicant for patent, except that an
international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
subsection of an application filed in the United States only if the international application designated the United
States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11, 22, 27-28, 31-37, and 41-44 are rejected under 35 U.S.C. 102(e)(1) as being

anticipated by Zhou et al. (US 2003/0120432 A1). The priority date relied upon for the above

mentioned patent application publication comes from provisional applications.

Copies of the provisional applications are not included with this Office action, because

the copies could not be readily obtained when the Office action was mailed. Should applicant

desire a copy of such a provisional application, applicant should promptly request the copy from

the Office of Public Records (OPR) in accordance with 37 CFR 1.14(a)(1)(iv), paying the

required fee under 37 CFR 1.19(b)(1). If a copy is ordered from OPR, the shortened statutory

period for reply to this Office action will not be reset under MPEP § 710.06 unless applicant can

demonstrate a substantial delay by the Office in fulfilling the order for the copy of the

provisional application. Where the applicant has been notified on the PTO-892 that a copy of the

provisional application is not readily available, the provision of MPEP § 707.05(a) that a copy of

the cited reference will be automatically furnished without charge does not apply.

Zhou et al. disclose a method for generating a custom probe array design wherein a

system receives user-selected identifiers (array design parameters) (abstract), as stated in instant

claims 1, 6, and 22. Zhou et al. disclose the user selecting probe set identifiers from a

corresponding list that correspond to a gene (paragraph 0009). Zhou et al. disclose a web portal

processes inquiries regarding biological information and a user selects « probe set identifiers »

which enable detection of nucleic acids and genes for microarray experiments (paragraph 0005)

which represents a customer selecting at least one array design parameter and at least one gene of

interest, as stated in instant claims 1, 22, and 27. Zhou et al. disclose the genomic portal system

receives user-selected identifiers including sequence information, the system verifies probes

corresponding to identifiers and generates a custom probe array design (paragraphs 0006 and

0008) and constructing and arranging arrays to detect and/or measure any one gene expression

(paragraph 0007) which represents providing parameters to the vendor who curates the sequence

and selects the probes specific for the curated sequence as mentioned in paragraph 0005, as

stated in instant claims 1, 22, and 27. Zhou et al. disclose using remote vendor business systems

and servers (Figure 4, #404 and paragraph 0134), as stated in instant claims 1, 2, 22, 27, and 31.

Zhou et al. disclose further generation including modifying or rejecting one or more user-

selected probe array format factors including user-selected probe set identifiers and displaying

this information to the user (paragraph 0010) which represents the vendor selecting at least one

probe specific for the curated gene sequence, as stated in instant claims 1, 22, and 27. Zhou et al.

disclose a verifier/designer performs an analysis of the user-provided input sequence to

determine which portions of the sequence should be represented by probes because some

portions may consist of short, common repeats that are not effective in uniquely representing the

sequence as a whole (paragraph 0125) which represents curating comprising removal of

commonly repeated subsequences, as stated in instant claims 42-44. Zhou et al. disclose

analyzing the complexity of the user-provided sequence and report that the sequence is

insufficiently complex with too many repeats to be uniquely and/or reliably represented by a

probe set (paragraph 0126). Zhou et al. disclose a method and system (vendor) enabling a

number of users to share space on an array or enabling a number of users to share in ordering

portions of a lot of catalog probe arrays for economical benefit (paragraphs 0005 and 0006),

which represents the vendor providing at least one additional array design parameter including

probe selection as well as layout parameters, as stated in instant claims 1, 5, 27, and 34. Zhou et

al. disclose synthesizing the probe arrays (paragraph 0010) which represents completing the

array design and fabricating the array, as stated in instant claims 1, 22, 27, and 28. Zhou et al.

disclose the user may select many probe array format factors such as number of probes,

dimensions of probes, maximum number of probes representing one or more genes, substrate

material (paragraph 0009) which represents the user selecting "other" customer selected array

design parameters, as stated in instant claims 33-36. Zhou et al. disclose the user may select

geographic dispersion of probe sets (paragraph 0009) which represents a customer selected array

design layout and probe parameters, as stated in instant claims 5, 34, and 35. Zhou et al. disclose

using a probe set with controls, as stated in instant claims 7 and 36. Figure 14 shows a graphical

user interface for providing options and design selections (paragraph 0039), as stated in instant

claims 8 and 37. Figure 15 shows a graphical user interface for providing one or more custom

probe array designs or probe set designs (layouts) (paragraphs 0010 and 0040) which represents

visual display of array layout of at least one customer selected array design parameter, as stated

in instant claim 9. Zhou et al. disclose receiving probe set identifiers that identify potential

probes and verifying probe sets of verified probes (paragraph 0007), which represents some

probe selection by a vendor, as stated in instant claims 1 and 27. Zhou et al. disclose displaying

the custom probe array design to the user via graphical user interface and receives a user

selection specifying acceptance, modification, or rejection of the design (abstract and Figure 15),

as stated in instant claims 10 and 11. The user acceptance of array design represents completion

of the design by the vendor, as stated in instant claims 1, 2, 22, 27, and 31. The user

modification of the design represents completion of the array design by the customer, as stated in

instant claims 1, 3, 22, 27, and 32. Zhou et al. disclose providing the user with the accepted or

modified custom probe array (abstract). Zhou et al. disclose using arrays for genes and nucleic

acids (Figure 2 #230), as stated in instant claims 4, 22, and 27. Zhou et al. disclose researchers

using microarrays to determine which genes are expressed in certain cells or organs, extracting

biological information, and designing follow-up experiments (paragraph 0004). Zhou et al.

disclose the probe set identifiers may be selected by the user from a predetermined list where

each item may correspond to an EST, gene, splice variant, or protein (paragraph 0009) which

represents selecting at least one gene of interest and probe parameter for said gene, as stated in

instant claim 27. Zhou et al. disclose systems, methods, and computer program products to

address these needs, such as allowing the user to select probe identifiers that may be associated

with probe sets of one or more probes that are capable of detecting genes of interest, which are

then correlated with data and/or products to be provided to the user (paragraph 0006), as stated in

instant claim 27. Figures 7A and 10 show displaying and providing genomic data, sequence

data, expression data, and various other forms of information to the user (paragraphs 0030 and

0034), as stated in instant claim 27. Zhou et al. disclose synthesizing probes on a substrate

(paragraph 0090), as stated in instant claim 28. Zhou et al. disclose selecting substrate material

or design and synthesized probe arrays (paragraph 0010), as stated in instant claim 28. Zhou et

al. disclose constructing probe arrays to detect or measure one or any combination of biological

information including gene expression, genotype, cells, cellular membranes, and organelles

(paragraph 0007) which represents an in situ array, as stated in instant claim 41.

Thus, Zhou et al. anticipate the instant invention.

Applicant points out that the pending claims must be given the broadest reasonable

interpretation consistent with the specification. This statement is acknowledged. It is also noted

that in the absence of clear and concise definitions in the originally filed application, a broadly

reasonable interpretation of the claim language is appropriate. It is further noted that although

the claims are interpreted in light of the specification, limitations from the specification are not

read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

While the curating limitations set forth in new dependent claims 42-44 address specifics

regarding curating, it is noted that the other examined claims do not contain these limitations.

Applicant argues about the word "curation". Again, this argument is unpersuasive as "curation"

is not recited in the claims. Applicant argues that "such as" terminology provides a clear and

concise definition. This statement is found unpersuasive because "such as" terminology

provides an exemplification which is not a limiting definition. Applicant argues that Zhou et al.

do not disclose selecting by the customer of at least one array design parameter. This statement

is found unpersuasive as Zhou et al. disclose a method for generating a custom probe array

design wherein a system receives user-selected identifiers (array design parameters) (abstract).

Zhou et al. disclose the user selecting probe set identifiers from a corresponding list that

correspond to a gene (paragraph 0009). Zhou et al. disclose a web portal processes inquiries

regarding biological information and a user selects « probe set identifiers » which enable

detection of nucleic acids and genes for microarray experiments (paragraph 0005) which

represents a customer selecting at least one array design parameter. Probe identifiers are

reasonably interpreted to be at least one array design parameter, as any parameter involved in the

design of an array falls under this category. Applicant argues that the Zhou et al. probes are not

selected by the customer specifically for the gene that is selected by the customer. This

statement is found unpersuasive and irrelevant as instant claim 1, for example, does not recite a

probe must be selected by the customer specifically for the gene. It merely recites selecting a

parameter and selecting at least one gene of interest. Applicant argues a hypothetical failure

situation if the vendor's database does not contain a probe for the customer-selected gene of

interest in the Zhou et al. reference. This statement is found unpersuasive as the Zhou et al.

reference anticipates every limitation cited in the instant claims as currently worded. Applicant is

reminded that embodiments of hypothetical situations, especially those not reflected in the

claims, are not proper subject matter for rejections under 35 USC 102.

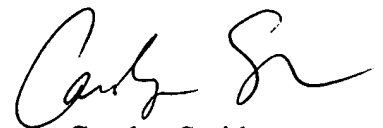*Conclusion*

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile

transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center. The

faxing of such papers must conform to the notices published in the Official Gazette, 1096 OG 30

(November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)

(See 37 CFR §1.6(d)). The Central Fax Center number for official correspondence is (571) 273-

8300.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Carolyn Smith, whose telephone number is (571) 272-0721. The

examiner can normally be reached Monday through Thursday from 8 A.M. to 6:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew Wang, can be reached on (571) 272-0811.

Any inquiry of a general nature or relating to the status of this application should be

directed to Legal Instruments Examiner Tiffany Tabb whose telephone number is (571) 272-

0556.

June 15, 2006

Carolyn Smith
Examiner
Art Unit 1631